

# Climate Change Study Sheet

1. climate change Long-term alteration in Earth's climate patterns, including temperature, precipitation, and weather events.
2. greenhouse effect Natural process where certain gases in Earth's atmosphere trap heat, warming the planet.
3. greenhouse gases Gases in the atmosphere that contribute to the greenhouse effect, such as carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and water vapor.
4. global warming Increase in Earth's average surface temperature due to the greenhouse effect and human activities.
5. carbon dioxide (CO<sub>2</sub>) Major greenhouse gas released primarily by burning fossil fuels and deforestation.
6. methane (CH<sub>4</sub>) Greenhouse gas produced by livestock, landfills, and natural sources like wetlands.
7. deforestation Removal of forests or trees, reducing the amount of carbon dioxide absorbed from the atmosphere.
8. fossil fuels Non-renewable energy sources, such as coal, oil, and natural gas, formed from decayed organic matter.
9. renewable energy Energy derived from natural resources that are replenished on a human timescale, such as solar, wind, and hydroelectric power.
10. carbon footprint Total amount of greenhouse gases emitted directly or indirectly by an individual, organization, or product.
11. sea level rise Increase in the average global sea level due to melting ice caps and glaciers and thermal expansion of seawater.
12. climate adaptation Adjustment or preparation of societies and ecosystems to withstand the impacts of climate change.
13. climate mitigation Efforts to reduce or prevent the emission of greenhouse gases and limit the extent of climate change.
14. Paris Agreement International treaty aiming to limit global warming to well below 2 degrees Celsius above pre-industrial levels and pursue efforts to limit it to 1.5 degrees Celsius.
15. renewable energy Energy derived from natural resources that are replenished on a human timescale, such as solar, wind, and hydroelectric power.
16. carbon capture and storage (CCS) Technology that captures carbon dioxide emissions from power plants and other industrial sources, preventing them from entering the atmosphere.
17. climate resilience Ability of individuals, communities, and ecosystems to adapt to and recover from the impacts of climate change.
18. sustainable development Development that meets the needs of the present without compromising the ability of future generations to meet their own needs, considering environmental, economic, and social factors.